

WHAT IS CLAIMED IS:

1. An energy service business system comprising:  
a database which stores past data about the energy consumption before taking energy-saving measures;  
measuring means which measures the energy consumption after taking energy-saving measures; and  
calculating means which calculates the energy curtailment quantities before and after taking energy-saving measures by incorporating measurement data measured by said measuring means via a communication line and comparing said measurement data and the past data stored in said database.

2. An energy service business system according to claim 1, wherein:

said past data in said database are stored in a form correlated with attribute data regarding variable factors of the energy consumption;

said measuring means is for measuring said measurement data as correlated with said attribute data; and

said calculating means retrieves past data with which said attribute data agree within a certain allowable range, and compares said past data and said measurement data.

Sub A2

3. An energy service business system according to claim 2, wherein said calculating means retrieves a plurality of past data corresponding to a plurality of attribute data approximating said measured attribute data; performing calculation for estimating past data corresponding to said measured attribute data from said plurality of past data; and compares the thus calculated past estimated data and said measurement data.

4. An energy service business system according to claim 2, wherein said attribute data represents at least one of temperature, humidity and load quantity of an energy-saving object equipment.

5. An energy service business system according to claim 1, wherein said calculating means calculates the amount of curtailment of the energy costs on the basis of said energy curtailment quantity, and issues a bill demanding payment of an amount obtained by multiplying said amount of curtailment by a predetermined ratio.

6. An energy service business system according to claim 5, wherein said ratio is determined with reference to the operating hours or the operating rate of said object equipment.

7. An energy service business system according to claim 6, where:

if the total amount of the fixed costs such as depreciation and tax and tariffs for a single fiscal year for taking energy-saving measures and the variable costs such as maintenance cost of energy-saving equipment is  $Q$ , the annual amount of curtailment of energy costs is  $P$ , and  $\alpha$  and  $\beta$  are positive coefficients (where  $\alpha > \beta$ ), said energy service enterprise receives:

$X1\%$  of the curtailment amount of energy costs when  $P \geq \alpha Q$ ;

$X2\%$  of the curtailment amount of energy costs when  $\beta Q \leq P < \alpha Q$  (where,  $X1 < X2$ ); and

a predetermined amount when  $P < \beta Q$ .

8. An energy service business method comprising the steps of installing an energy-saving equipment with the installation cost thereof paid by the energy service enterprise; measuring the energy consumption of said object equipment after installation of said energy-saving equipment; determining the difference of the resultant measured value from the energy consumption of said object equipment before installation of said energy-saving equipment previously stored in the database; calculating the

A3d  
amount of curtailment of the energy costs on the basis of the thus determined difference; and allowing said energy service enterprise to collect said installation cost from said amount of curtailment.

9. An energy service business method comprising the steps of applying energy-saving measures to an object equipment with the cost thereof paid by the energy service enterprise; measuring the energy consumption after taking the energy-saving measures; calculating the amount of curtailment of energy costs by comparing the thus measured value with the energy consumption before taking the energy-saving measures previously stored in the database; and allowing said energy service enterprise to receive at least a part of said amount of curtailment.

A3d  
10. An energy service business method according to claim 9, further comprising the steps of storing said energy consumption before taking energy-saving measures in said database, together with the attribute data of variable factors of the energy consumption; measuring the energy consumption after taking said energy-saving measures, together with said attribute data; and comparing said measured value with the energy consumption before taking said energy-saving measures corresponding to said measured

attribute data.

11. An energy service business method according to claim 10, wherein said attribute data represents at least one of temperature, humidity and the load quantity of said object equipment.

12. An energy service business method according to claim 9, wherein said amount received by the energy service enterprise is determined with reference to the operating hours or the operating rate of said object equipment.

13. An energy service business method according to claim 9, wherein, when the quantity of energy curtailment is smaller than a predetermined reference value, said energy service enterprise performs maintenance or improvement without compensation of the equipment to which the energy-saving measures are applied so as to satisfy the reference value.

14. An energy service business method according to claim 9, wherein:

if the total amount of the fixed costs such as depreciation and tax and tariffs for a single fiscal year for taking energy-saving measures and the variable costs

such as maintenance cost of energy-saving equipment is  $Q$ , the annual amount of curtailment of energy costs is  $P$ , and  $\alpha$  and  $\beta$  are positive coefficients (where  $\alpha > \beta$ ), said energy service enterprise receives:

$X_1\%$  of the curtailment amount of energy costs when  $P \geq \alpha Q$ ;

$X_2\%$  of the curtailment amount of energy costs when  $\beta Q \leq P < \alpha Q$  (where,  $X_1 < X_2$ ); and

a predetermined amount when  $P < \beta Q$ .

15. An energy service business method according to claim 14, wherein said  $X_2$  is calculated by the following formula:

$$X_2 = X_1 + (\alpha - P/Q)(100 - X_1)/(\alpha - \beta).$$

16. An energy service business method comprising the steps of drafting energy-saving measures by the energy service enterprise or a related organization thereof; assuring, under certain conditions, a quantity of curtailment of energy consumption available when taking energy-saving measures in accordance with the thus drafted measures; measuring the energy consumption after taking the energy-saving measures; calculating the amount of curtailment of energy costs by comparing the thus measured value with the energy consumption before taking the energy-

saving measures previously stored in a database, and periodically confirming the assured quantity of curtailment.

17. An energy service business method according to claim 16, further comprising the steps of storing said energy consumption before taking energy-saving measures in said database, together with the attribute data of variable factors of the energy consumption; measuring the energy consumption after taking said energy-saving measures, together with said attribute data; and comparing said measured value with the energy consumption before taking said energy-saving measures corresponding to said measured attribute data.

18. An energy service business method according to claim 17, wherein said attribute data represents at least one of temperature, humidity and the load quantity of said object equipment.

19. An energy service business method according to claim 16, wherein said certain conditions are conditions determined as to variable factors having an important effect on curtailment of the energy consumption such as the operating rate or operating hours, operating conditions (production quantity, frequency of batch processing, etc.)

of the energy-saving object equipment.

20. An energy service business method according to claim 19, wherein said certain conditions have ranges.

21. An energy service business method according to claim 16, wherein said energy service enterprise receives a compensation in an amount corresponding to the quantity of energy curtailment in excess of the assured value in reward for assuring a quantity of energy curtailment, or as a cost to be appropriated for maintenance or improvement.

22. An energy service business method according to claim 21, wherein the amount received by said energy service enterprise is determined with reference to the operating hours or the operating rate of said object equipment.

23. An energy service business method according to claim 21, wherein, when the quantity of energy curtailment is under a predetermined reference value, said energy service enterprise performs maintenance or improvement of the equipment subjected to energy-saving measures without compensation so as to satisfy the reference value.

38

44